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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,910	08/12/2004	Christian D. Hofstader	1589.10	3967

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EXAMINER	
MUHEBBULLAH, SAJEDA	
ART UNIT	**PAPER NUMBER**
2174	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/710,910	HOFSTADER ET AL.	
	Examiner	Art Unit	
	Sajeda Muhebbullah	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 18 is objected to because of the following informalities:

The phrase "as an end-user-definable a pre-selected" in lines 18-19 is unclear.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. Claims 1, 5, and 14-19 contain the term "substantially" making the claims unclear.

5. Claim 7 recites the limitation "the pre-selected sound" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-9 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Raman et al. ("Raman", US 5,572,625).

As per claim 1, Raman teaches a screen reader software product comprising:

a reader module communicatively coupled with resident software on a computer, the reader module adapted to collect textual and non-textual display information generated by the resident software (col.4, lines 21-38);

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to an output device (col.4, lines 46-55);

a schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion (col.3, lines 44-50).

As per claim 2, Raman teaches the output device to be a speech synthesizer (col.4, lines 50-55).

As per claim 3, Raman teaches the software product wherein the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration (col.15, lines 10-20; col.20, lines 66-67; col.22, lines 15-17).

As per claim 4, Raman teaches the software product wherein the schema module modifies the broadcast of the textual display information to communicate the non-textual display

information by altering characteristics of the speech synthesizer, the characteristics selected from the group consisting of pitch, speed, volume, emphasis, simulated gender, simulated accent, simulated age, and pronunciation (col.18, lines 49-55; col.21, lines 20-21).

As per claim 5, Raman teaches the software product wherein the schema module includes an additional audio output layer to the broadcast of the textual display information to audibly communicate the non-textual display information in substantially concurrent fashion with the synthesized text (col.3, lines 3-7).

As per claim 6, Raman teaches the software product wherein the additional audio output layer broadcasts a pre-selected sound associated with the non-textual display information (col.15, lines 10-20, *predetermined rules decide the sound associated with non-textual information*).

As per claim 7, Raman teaches the software product wherein the pre-selected sound is end-user-definable (col.9, lines 35-46).

As per claim 8, Raman teaches the software product wherein pre-selected sound is selected from the group consisting of dynamically generated sound and prerecorded digital audio (col.9, lines 35-41).

As per claim 9, Raman teaches the software product wherein the schema module includes a plurality of additional audio outputs layer to the broadcast of the textual display information to audibly communicate a corresponding plurality of non-textual display information in substantially concurrent fashion with the synthesized text (col.3, lines 3-7; col.15, lines 18-20).

As per claim 17, Raman teaches a screen reader software product comprising:

a reader module communicatively coupled with resident software on a personal computer, the reader module adapted to collect textual and non-textual display information generated by the resident software (col.4, lines 21-38),

the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration (col.15, lines 10-20; col.20, lines 66-67; col.22, lines 15-17);

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to speech synthesizer (col.4, lines 46-55),

an end-user-definable schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion whereby the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering characteristics of the speech synthesizer (col.3, lines 44-50),

the characteristics selected from the group consisting of pitch, speed, volume, emphasis, simulated gender, simulated accent, simulated age, and pronunciation (col.18, lines 49-55; col.21, lines 20-21).

As per claim 18, Raman teaches a screen reader software product comprising:

a reader module communicatively coupled with resident software on a personal computer, the reader module adapted to collect textual and non-textual display information generated by the resident software (col.4, lines 21-38),

the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration (col.15, lines 10-20; col.20, lines 66-67; col.22, lines 15-17);

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to speech synthesizer (col.4, lines 46-55);

an end-user-definable schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion (col.3, lines 44-50) whereby the schema module includes an additional audio output layer (col.3, lines 3-7) to the broadcast of the textual display information to audibly communicate the non-textual display information as an end-user-definable a pre-selected sound selected from the group consisting of dynamically generated sound and prerecorded digital audio in substantially concurrent fashion with the synthesized text (col.9, lines 35-46).

Claim 19 is similar in scope to claim 7, and is therefore rejected under similar rationale.

As per claim 20, Raman teaches the software product wherein a plurality end-user schema definitions are assignable to specific resident software applications (col.19, lines 27-38).

As per claim 21, Raman teaches the software product wherein end-user schema definitions generated by an end user are shareable with other users (col.19, lines 27-38, *rules can be shared to other users through a file*).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) in view of Giuliani et al. ("Giuliani", US 2002/0105496).

As per claim 10, Raman teaches outputting of textual and non-textual display information. However, Raman does not teach the output device to be a Braille display. Giuliani teaches the output of textual and non-textual display information to be a Braille display (para.3, lines 1-4; para.18, line 4; para.21, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Giuliani's teaching with Raman's product in order to allow the blind the opportunity to read and determine the attributes associated with text.

As per claim 11, Giuliani teaches the software product wherein the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration (para.42, lines 6-9; para.43).

As per claim 12, Giuliani teaches the software product wherein the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering tactile characteristics of the Braille display (para.42-43).

As per claim 13, Giuliani teaches the software product wherein the tactile characteristics of the Braille displayed modified by the schema module are selected from the group consisting of display speed, pin protrusion level, pin retraction level and pin vibration (para.42-43).

As per claim 15, Raman teaches the software product of claim 1 wherein the output device is a speech synthesizer. However, Raman does not disclose the output device to be an array of a speech synthesizer and a Braille display, the speech synthesizer audibly broadcasts textual display information and the Braille display tactically outputs non-textual display information in substantially concurrent fashion. Giuliani teaches the output of textual and non-textual display information to be on a Braille display (para.3, lines 1-4; para.18, line 4; para.21, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Giuliani's teaching with Raman's product in order to allow blind users the opportunity to listen to and visualize the display.

10. Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) in view of Burchart ("Burchart", US 4,836,784).

As per claim 14, Raman teaches the software product of claim 1 wherein the output device is a speech synthesizer. However, Raman does not teach the output device to be an array of two Braille displays, a first Braille display outputs textual display information and a second Braille display outputs non-textual display information in substantially concurrent fashion. Burchart teaches the output of both textual information and graphics on an array of Braille

displays (Fig.2-6; col.5, lines 38-64; claim1). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Burchart's teaching with Raman's product in order to allow blind users the opportunity to visualize the display.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) in view of Rohen ("Rohen", US 5,186,629).

As per claim 16, Raman teaches outputting of textual and non-textual display information. However, Raman does not teach the output device to be an array of a speech synthesizer and a vibratory apparatus, the speech synthesizer audibly broadcasts textual display information and the vibratory apparatus vibrates at pre-selected frequencies responsive to non-textual display information in substantially concurrent fashion. Rohen teaches an output device which audibly and tactilely outputs textual and non-textual display information respectively (col.6, lines 23-32; col.7, lines 7-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Rohen's teaching with Raman's product in order to allow blind users the opportunity to visualize the display.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DuBrucq (US 4,520,501) teaches a tactile simulator which bends the pins at different frequencies according to pitch.

Carro (US 2004/0091842) teaches a system of detecting hyperlinks within a Braille display.

Stephenson (6,385,581) teaches a system of providing a background sound to text.

Communications

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajeda Muhebbullah whose telephone number is **(571) 272-4065**. The examiner can normally be reached on Tuesday/Thursday or alt. Mondays from 8:00 am to 4:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (571) 272-4063.

The fax number for the organization where this application or proceeding is assigned are as follows:

(571) 273-8300 [After Final Communication]

(571) 273-8300 [Official Communication]

(571) 273-8300 [For status inquiries, Draft Communication]

Sajeda Muhebbullah
Patent Examiner
Art Unit 2174

SY D. LUU
PRIMARY EXAMINER